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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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21186 7590 06/12/2007 SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER KASRAIAN, ALLAHYAR	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/615,471

Applicant(s)

TSIEN ET AL.

Examiner

Allahyar Kasraian

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by **Koohgoli et al. (U.S. Patent # 5,276,908)**.

Consider **claim 1**, Koohgoli et al. clearly show and discloses a method, comprising: scanning available channels (see FIG. 3a, 3b and lines 3-5 of column 7 where it says, "In operation, when a call set-up is attempted between the base station 30a and the subscriber terminal 30b, all available traffic channels are scanned."); measuring a received signal power level for the channels scanned in said scanning; comparing the measured received signal power level to a threshold value to provide a difference; if the difference is greater than a predetermined value, then indicating the channel as occupied, otherwise indicating the channel as available (see lines 11-17 of column 7 where it says, "The power level of each traffic channel is detected by the power detector

circuit 36a. If a scanned traffic channel has a power level below a first predetermined threshold, it is selected as a useable traffic channel and stored in memory 38a. If the scanned traffic channel has a power level above a second predetermined threshold, it is considered unusable"); and selecting a channel from a channel indicated as available (see lines 22-27 of column 7 where it says, "The list of useable traffic channels are sent to the subscriber terminal via a signaling channel (not shown) selected on a frequency that does not overlap the reserved frequencies of fixed services").

3. **Claim 7** is rejected under 35 U.S.C. 102(e) as being anticipated by **Choi et al. (U.S. Patent # 7,206,840)**.

Consider **claim 7**, Choi et al. clearly show and disclose an article comprising a storage medium having stored thereon instructions that, when executed by a computing platform, result in dynamic frequency selection in a wireless local area network by (see FIG. 2 and lines 64-67 of column 3 where it says, "Both the AP and STA may include ... a CPU 22... a storage module 28, a random access memory (RAM) 30, a read-only memory (32)...", and lines 7-12 of column 4 where it says, "The CPU 22 operates under the control of an operating system contained in the ROM 32 and utilizes RAM 30 to perform the frequency selection within a wireless local area network (WLAN), by enabling the AP to provide a new channel or wireless link for all stations (STAs) associated with its BSS."): scanning available channels (see FIG. 3 step 100: monitoring of

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channels); measuring a received signal power level for the channels scanned in said scanning; comparing the measured received signal power level to a threshold value to provide a difference; if the difference is greater than a predetermined value, then indicating the channel as occupied (see lines 23-34 of column 6 where it says, "the measurement of noise or interference level by 802.11 non-compliant devices...is detected and reported to the AP. The existence of such a device is detectable not as a BSS, but as a co-channel interference. The STA shall keep track of the CCA busy periods in order to report back the fractional period during which the CCA was busy out of the whole measurement duration. Note that CCA shall be indicated busy by (1) the start of a valid OFDM transmission at a receiver level  $\geq -82$  dBm with a probability  $>90\%$  within 4 usec, and (2) any signal above 62 dBm."), otherwise indicating the channel as available; and selecting a channel from a channel indicated as available (see FIG. 3 step 200: Selecting a New Channel By AP, and lines 11-13 of abstract where it says, "selecting one of the candidate channels based on the channel quality report for use in communication between the AP and the plurality of STAs")

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 2 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koohgoli et al. (U.S. Patent # 5,276,908)** in view of **Okuba (U.S. Patent Application Publication # 2004/0156334 A1)**.

Consider **claim 2 as applied to claim 1 above**, Koohgoli et al. disclose the claimed invention except determining a larger gap between available channels, wherein said selecting includes selecting a channel within the larger gap.

In the same field of endeavor, Okuba clearly shows and discloses a radio control server which assigns (selects) a new channel which has the largest space (see lines 4-12 of abstract where it says "the radio network system, the plurality of Radio Bearer Servers always notifies a plurality of Radio Control Servers of a resource (channel) using state, and a Radio Control Server (6a) which controls receiving a new call assigns the new call to a Radio Bearer Server (4a) whose resource (channel) has the largest empty space, by judging a using state of each Radio Bearer Server based on the resource (channel) using states").

Therefore it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate a method for selecting a channel from the plurality of available channels with the largest frequency space from the other channels taught by Okuba to the channel selecting method and apparatus shown by Koohgoli et al. for purpose of sharing frequency channels to within a communication network. The proper motivation is to manage frequency channel resources.

Consider **claim 4**, Koohgoli et al., as modified by Okuba disclose the claimed invention (indicated with the same limitations of **claim 2**) **as applied to**

**claim 1 above** except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels with close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

6. **Claims 3 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koohgoli et al. (U.S. Patent # 5,276,908)** in view of **Frixon (U.S. Patent # 5,138,456)**.

Consider **claim 3 as applied to claim 1 above**, Koohgoli et al. disclose the claim invention except determining a larger gap between available channels, wherein said selecting includes selecting a channel at a midpoint within the larger gap.



In the same field of endeavor, Frixon clearly shows and discloses a unit to select a frequency in the midpoint of the largest gap (see FIG.1 Calculating unit 10, and lines 38-44 of column 4 where it says, "The microprocessor of the calculating unit is programmed to select an emission frequency located substantially in the middle of the largest interval separating two channels already used and a frequency which does not correspond to a multiple or a submultiple of one of the frequencies occupied in order not to disturb the latter")

Therefore, it would have been obvious to a person with the ordinary skills in art to apply the unit for finding the midpoint frequency between the largest gap as taught by Frixon to the channel selecting method and apparatus shown by Koohgoli et al. for purpose of sharing frequency channels to within a communication network. The proper motivation is to manage frequency channel resources.

Consider **claim 5**, Koohgoli et al., as modified by Frixon disclose the claimed invention (indicated with the same limitations of **claim 3**) **as applied to claim 1 above** except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within a midpoint of the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel within a midpoint of the larger gap at a higher frequency when there are two or more larger gaps

presented. One of ordinary skill in the art would have expected applicant's invention to perform equally well with either selecting a channel within midpoint of the larger gap at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels with close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

7. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Koohgoli et al. (U.S. Patent # 5,276,908)** in view of **Lopez (U.S. Patent # 7,177,291 B1)**

Consider **claim 6 as applied to claim 1 above**, Koohgoli et al. disclose the claim invention except determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel by executing the method again at said scanning.

In the same field of endeavor, Lopez clearly shows and discloses a method and apparatus for determining collision when selecting a channel, and in case of detecting collision in the selected channel, requesting a new channel and suggesting a new transmission channel (see FIG. 2 and the summary of the invention in lines 46-67 of column 1 and lines 1-3 of column 2 where it particularly says, "in case of collision, transmission of a change of channel request to the first network... the change of channel request comprises... an

identifier of...the number of times that request has been sent, a suggestion of transmission channel for the first network")

Therefore, it would have been obvious to a person with the ordinary skills in the art to apply the method and apparatus for detecting a collision in a selected channel and then requesting a new channel taught by Lopez in the channel selection method suggested by Koohgoli et al. for purpose of transmitting data or signal on the best pre-examined available carrier channel. The proper motivation is to manage frequency channel resources.

8. **Claims 8 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** in view of **Okuba (U.S. Patent Application Publication # 2004/0156334 A1)**.

Consider **claim 8 as applied to claim 7 above**, Choi et al. disclose the claimed invention except determining a larger gap between available channels, wherein said selecting includes selecting a channel within the larger gap.

In the same field of endeavor, Okuba clearly shows and discloses a radio control server which assigns (selects) a new channel which has the largest space (see lines 4-12 of abstract where it says "the radio network system, the plurality of Radio Bearer Servers always notifies a plurality of Radio Control Servers of a resource (channel) using state, and a Radio Control Server (6a) which controls receiving a new call assigns the new call to a Radio Bearer Server (4a) whose

resource (channel) has the largest empty space, by judging a using state of each Radio Bearer Server based on the resource (channel) using states”).

Therefore it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate a method for selecting a channel from the plurality of available channels with the largest frequency space from the other channels taught by Okuba to the channel selecting method and apparatus shown by Choi et al. for purpose of sharing frequency channels to within a communication network. The proper motivation is to manage frequency channel resources.

Consider **claim 10**, Choi et al., as modified by Okuba disclose the claimed invention (indicated with the same limitations of **claim 8**) **as applied to claim 7 above** except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art, would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher

and lower frequency is a matter of Design Choice for the channels with close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

9. **Claims 9 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** in view of **Frixon (U.S. Patent # 5,138,456)**.

Consider **claim 9 as applied to claim 7 above**, Choi et al. disclose the claim invention except determining a larger gap between available channels, wherein said selecting includes selecting a channel at a midpoint within the larger gap.

In the same field of endeavor, Frixon clearly shows and discloses a unit to select a frequency in the midpoint of the largest gap (see FIG.1 Calculating unit 10, and lines 38-44 of column 4 where it says, "The microprocessor of the calculating unit is programmed to select an emission frequency located substantially in the middle of the largest interval separating two channels already used and a frequency which does not correspond to a multiple or a submultiple of one of the frequencies occupied in order not to disturb the latter")

Therefore, it would have been obvious to a person with the ordinary skills in art to apply the unit for finding the midpoint frequency between the largest gap as taught by Frixon to the channel selecting method and apparatus shown by

Choi et al. for purpose of sharing frequency channels to within a communication network. The proper motivation is to manage frequency channel resources.

Consider **claim 11**, Choi et al., as modified by Frixon disclose the claimed invention (indicated with the same limitations of **claim 9**) **as applied to claim 7 above** except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within a midpoint of the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel within a midpoint of the larger gap at a higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with either selecting a channel within midpoint of the larger gap at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is the matter of design choice for the channels with close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

10. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** in view of **Lopez (U.S. Patent # 7,177,291 B1)**

Consider **claim 12 as applied to claim 7 above**, Choi et al. disclose the claim invention except determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel by executing the method again at said scanning.

In the same field of endeavor, Lopez clearly shows and discloses a method and apparatus for determining collision when selecting a channel, and in case of detecting collision in the selected channel, requesting a new channel and suggesting a new transmission channel (see FIG. 2 and the summary of the invention in lines 46-67 of column 1 and lines 1-3 of column 2 where it particularly says, "in case of collision, transmission of a change of channel request to the first network...the change of channel request comprises...an identifier of...the number of times that request has been sent, a suggestion of transmission channel for the first network")

Therefore, it would have been obvious to a person with the ordinary skills in the art to apply the method and apparatus for detecting a collision in a selected channel and then requesting a new channel taught by Lopez in the channel selection method suggested by Choi et al. for purpose of transmitting data or signal on the best pre-examined available carrier channel. The proper motivation is to manage frequency channel resources.

11. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** in view of **Stadelmeier et al. (U.S. Patent Application Publication # 2004/0157580 A1)**.

Consider **claim 13**, Choi et al. clearly shows and disclose an apparatus comprising a transceiver (see FIG. 2 transmitter/receiver 24); and a baseband processor (considered as CPU) wherein is capable of dynamically selecting a frequency on which to communicate via said transceiver on a wireless local area network (see FIG. 2 and lines 64-67 of column 3 where it says, "Both the AP and STA may include ... a CPU 22, a transmitter/receiver 24, ... a random access memory (RAM) 30, a read-only memory (32)", and lines 7-12 of column 4 where it says, "The CPU 22 operates under the control of an operating system contained in the ROM 32 and utilizes RAM 30 to perform the frequency selection within a wireless local area network (WLAN), by enabling the AP to provide a new channel or wireless link for all stations (STAs) associated with its BSS.") by: scanning available channels (see FIG. 3 step 100: monitoring of channels); measuring a received signal power level for the channels scanned in said scanning; comparing the measured received signal power level to a threshold value to provide a difference; if the difference is greater than a predetermined value, then indicating the channel as occupied (see lines 23-34 of column 6 where it says, "the measurement of noise or interference level by 802.11 non-compliant devices...is detected and reported to the AP. The existence of such a device is detectable not as a BSS, but as a co-channel interference. The STA



shall keep track of the CCA busy periods in order to report back the fractional period during which the CCA was busy out of the whole measurement duration. Note that CCA shall be indicated busy by (1) the start of a valid OFDM transmission at a receiver level  $\geq -82$  dBm with a probability  $>90\%$  within 4 usec, and (2) any signal above 62 dBm.”), otherwise indicating the channel as available; and selecting a channel from a channel indicated as available (see FIG. 3 step 200: Selecting a New Channel By AP, and lines 11-13 of abstract where it says, “selecting one of the candidate channels based on the channel quality report for use in communication between the AP and the plurality of STAs”)

However, Choi et al. fails to disclose explicitly the CPU is a baseband processor or include a baseband processor.

In the same field of endeavor, Stadelmeier et al. clearly show and disclose an apparatus comprising a transceiver; and a baseband processor to couple to said transceiver (see FIG. 2 and FIG. 1 and lines 11-21 of paragraph [0090] where it says, “The block diagram of FIG. 2 elucidates in more detail the internal structure of anyone of the communication nodes 10,20 or communication units 10,20 or communication nodes 10,20 consists of an antenna 11,21, a RF section 12, 22, followed by base band digital signal processor 13, 23...Additionally, a microprocessor 15, 25 is provided which is connected to base band DSP 13, 23...”)

Therefore, it would have been obvious to a person with the ordinary skills in the art to include a baseband processor in wireless communications apparatus taught by Stadelmeier et al. in the CPU of wireless apparatus disclosed by Choi et al. for purpose of choosing wireless channels and processing the baseband signals in a wireless network. The proper motivation is to manage frequency channel resources.

12. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** in view of **Stadelmeier et al. (U.S. Patent Application Publication # 2004/0157580 A1)**, and further in view of **Pope, Jr. et al. (U.S. Patent # 6,654,616 B1)**

Consider **claim 17**, Choi et al., as modified by Stadelmeier et al. disclose the claimed invention (indicated with the same limitations of **claim 13**) except the apparatus comprises an omnidirectional antenna.

In the same field of endeavor, Pope, Jr. et al. clearly shows and discloses an omnidirectional antenna with a wireless local area transceiver (see FIG. 1, FIG. 2 and lines 29-36 of column 4 where it says, "Accordingly, antennas 13 and 14 may be respective bi-directional antennas, as are antennas 12A and 12B. Communication systems 10A and 10B are similar to one another and to communication system 10 of FIG. 1. Communication systems 10A are each configured with a directional high gain antenna 12A for outdoor use, and

communication systems 10B are each configured with an omni-directional antenna 12B for indoor use.”)

Therefore, it would have been obvious to a person with ordinary skills in the art to include an omnidirectional antenna as taught by Pope, Jr. et al. to the wireless local area network method and apparatus as displayed by Choi et al. as modified by Stadelmeier et al. for purpose of transmitting/receiving signal with a better SNR gain in a wireless communication network. The proper motivation is to select the optimum frequency channels.

13. **Claims 14 and 18 as applied to claims 13 and 17 respectively**, are rejected for the same reason(s) as set forth in **claim 9**.
14. **Claims 15 and 19 as applied to claims 13 and 17 respectively**, are rejected for the same reason(s) as set forth in **claim 10**.
15. **Claims 16 and 20 as applied to claims 13 and 17 respectively**, are rejected for the same reason(s) as set forth in **claim 11**.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The examiner can normally be reached on Monday through Friday 8:00 a.m. to 5:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Allahyar Kasraian  
AK/ak

May 30, 2007



**KENNETH VANDERPUYE**  
**SUPERVISORY PATENT EXAMINER**